

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1-22 are now present in the application. Claims 5-10 and 15-22 have been withdrawn in the previous reply. Claims 1 and 11 are independent. Reconsideration of this application, as amended, is respectfully requested.

Election/Restriction

The Examiner has acknowledged Applicants' election of Group III (claims 11-14), and has withdrawn claims 5-10 and 15-22 from further consideration.

Allowable Subject Matter

The Examiner has indicated that dependent claims 3 and 13 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Applicants appreciate the indication of allowable subject matter by the Examiner.

Priority Under 35 U.S.C. §119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. §119, and receipt of the certified priority document.

Drawings

Applicants thank the Examiner for accepting Applicants' drawings.

Claim Rejections Under 35 U.S.C. § 102

Claims 1, 2, 4, 11, 12 and 14 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Field, U.S. Patent No. 6,545,500 (referred to hereinafter as Field). Claims 1, 2, 4, 11, 12 and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Cheng et al., U.S. Patent Application Publication No. US 2002/0063574 A1, now U.S. Patent No. 6,720,791 (referred to hereinafter as Cheng). These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

In light of the foregoing amendments to the claims, Applicants respectfully submit that these rejections have been obviated and/or rendered moot. Without conceding to the propriety of the Examiner's rejections, but merely to clarify the claimed invention, as the Examiner will note, independent claims 1 and 11 have been amended. Independent claim 1 recites a combination of steps including "short-circuiting the ESD protection devices to form a current path on each of the signal wirings". Independent claim 11 recites a combination of elements including "a conductive shorting bar to

short-circuit the ESD protection devices". Applicants respectfully submit that the combination of steps set forth in claim 1 and the combination of elements set forth in claim 11 are not disclosed or suggested by the references relied on by the Examiner.

Field discloses a defect detecting method by applying the thermocouple junctions 702 on a column conductor 102 and using the voltmeter 303 to detect the voltage drop (see FIG. 7; col. 28, lines 5-37). The Examiner asserted on page 3 in the instant Office Action that the shorting bus 111 is the conductive shorting bar to short-circuit the ESD protection device as recited in claim 11. Applicants disagree.

In particular, the Examiner fails to indicate which elements disclosed by Field are the ESD protection devices. Field teaches that for the purposes of electrostatic discharge protection during manufacture and for process reasons, all the rows and all the columns are typically electrically connected together by row shorting bus 110 and column shorting bus 111 respectively (see col. 12, lines 58-62). Field at best teaches that electrically connecting all the row lines and all the column lines respectively to the shorting buses 110 and 111 provides the ESD protection. Thus, Field's buses 110 and 111 actually function as the ESD protection devices and there is no short-circuitry of these buses to detect any defect in the signal wirings. Accordingly, Field fails to teach the shorting buses 110 and 111 "to short-circuit the ESD protection devices"

as recited in claim 11. Field also fails to teach “short-circuiting the ESD protection devices to form a current path on each of the signal wirings” as recited in claim 1.

Cheng teaches an LCD testing method by grouping two signal lines with a jump line 20 to detect whether the feedback signal from the signal-line group falls within a predetermined range (see FIG. 2; col. 3, lines 16-26). Cheng’s jump line 20 is used to couple two signal lines 10 (see FIG. 2). Cheng fails to teach the jump line 20 short-circuiting any of the ESD devices on the signal lines 10.

Unlike Cheng, the present invention short-circuits the ESD protection devices, already existing in the display devices, to form a current path on each of the signal wirings so that the defect can be found based on the current flowing on each of the signal wirings. By using the elements (ESD protection devices) already provided in conventional display devices, in the present invention the process of detecting signal line defects can be effectively achieved with minimum cost and additional parts.

Accordingly, Cheng fails to teach “short-circuiting the ESD protection devices to form a current path on each of the signal wirings” as recited in claim 1 and “a conductive shorting bar to short-circuit the ESD protection devices” as recited in claim 11.

Since Field and Cheng fail to teach at least the above-note features of independent claims 1 and 11, independent claims 1 and 11 and their dependent claims 2-4 and 12-13 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are respectfully requested.

Additional Cited References

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state of the art, no further comments are necessary with respect thereto.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Application No.: 10/665,576
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Attorney Docket No. 2658-0311P
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Page 13

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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